

**ABSTRACT OF THE DISCLOSURE**

A method of forming a polycrystalline silicon layer. An amorphous silicon layer on a substrate is completely melted using a laser beam passed through a mask so as to form a polycrystalline silicon layer. The upper portion of the polycrystalline silicon layer is then re-melted and re-crystallized using a laser beam passed through a mask. The mask includes a high transmittance region for completely melting the amorphous silicon layer and a low transmittance region for re-melting the upper portion of the polycrystalline silicon layer.